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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,616	12/18/2001	George K. Kodokian	FA0984 US NA	3861

23906 7590 02/09/2004

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EXAMINER	
BOYKIN, TERRESSA M	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/023,616	KODOKIAN ET AL.	
	Examiner	Art Unit	
	Terressa M. Boykin	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1- 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5716558 see abstract, cols. 1 line 50 through col. 4 line 26, col.s 16 and 17 and example 1 in col. 25 lines 15 thourgh 44 further in view of US 5105843 .

Applicants claims relate to a process for producing substantially rounded thermosetting or thermoplastic polymer particles and to a device used to make such. The process includes forming a mixture of polymer pellets with at least one surfactant in an aqueous medium, rapidly melting the polymer pellets under plug flow and plug free heating conditions, shearing the melted pellets into the polymer particles, and rapidly cooling the polymer particles under plug free cooling conditions. Thermosetting particles can include a blend of thermosetting polymers and crosslinking agents. The device provides for plug free conditions to ensure high production rates with substantially no clogging in the polymer conveying and polymer shearing means used in the device. The plug flow conditions ensure more uniform and predictable shearing conditions, since the polymer pellets under the plug flow condition results in substantially no pellet to pellet variation in the pellet temperature. As a result, the coatings resulting form the use of these polymer particles have predictable and uniform powder coating properties. The process produces aqueous polymer particle slurry, which if desired, may be converted into polymer powder by removing water. The polymer particles are particularly suited for powder coatings in automotive OEM and refinish applications, and industrial coatings.

US 5716558 discloses a method for producing coating powders catalysts and drier water-borne coatings by spraying compositions with compressed fluids.
(8) In one embodiment, this invention relates to a process for forming solid particulates by spraying a liquid solvent-borne composition, which comprises:

(1) forming a liquid mixture in a closed system, said liquid mixture

comprising:

(a) a solvent-borne composition comprising:

(i) a nonvolatile materials fraction which is solid or capable of becoming solid, which is capable of being sprayed, and which is capable of forming solid particulates by solvent evaporation when sprayed and

(ii) a solvent fraction which is sufficiently volatile to render said solvent-borne composition capable of forming solid particulates when sprayed in (2); and

(b) at least one compressed fluid in an amount which when added to (a) renders said liquid mixture capable of forming a substantially decompressive spray in (2), wherein the compressed fluid is a gas at standard conditions of 0.degree. Celsius and one atmosphere pressure (STP); and

(2) spraying said liquid mixture at a temperature and pressure that gives a substantially decompressive spray by passing the mixture through an orifice into an environment suitable for forming solid particulates by solvent evaporation, wherein the spray has an average particle size greater than about one micron.

Although, the reference as a whole does not focus its discussion on the process of making the particles per se for the purpose of anticlogging etc., the reference does point out that such is a problem in the art and that the method as disclosed elevates that problem. Note in col. 16 line 58 through col. 17 line 6 that the reference acknowledges that the physical form of the particle is important and that the physical property of the solid content leads to more frequent clogging of piping and instrumatation as well as to a poorly dispersed product. Note further that the reference states in col. 16 line 17 that circular or reasonably round particules may be produced on a large scale without the problems commonly known in the art. The reference also discloses that the composition may contain conventional additives which are typically utilized in water-borne coatings. For example, pigments, pigment extenders, metallic flakes, fillers, surfactants, cross-linking agents, plasticizers, and mixtures thereof, may all be utilized.

The reference discloses a preparation of a substantially round polymer particle which wherein the mixture contains an aqueous medium, a surfactant, a heating process and a cooling process. The reference does not discloses that the mixture is specifically produced under "plug free conditions". However, the reference does disclose that the process as a whole produces plug and clog free spray. . Note cols. 16 through 17.

Note however, in view of US 5105843 discloses methods and apparatus for adding one or more fluids to another while substantially preventing the precipitation of one or

more dissolved solids contained within a first fluid when being added to a second fluid containing at least one non-solvent component for the one or more dissolved solids. More specifically, the present invention, is directed to improved methods and apparatus for forming a completely mixed, sprayable coating composition mixture while substantially avoiding undesirable precipitation of solids and consequential system plugging. The resultant admixed properly proportioned fluid mixture can then be sprayed onto a substrate to form the desired coated product. Specifically, the reference 5105843 discloses a method for substantially preventing the precipitation of one or more dissolved solids contained within a first fluid when being added to a second fluid containing at least one non-solvent component for the one or more dissolved solids comprising:

a) passing the first fluid containing the one or more dissolved solids through a first conduit as a laminar flow as determined by its Reynolds number; and

b) introducing the second fluid containing the at least one non-solvent component as a core of fluid within the first fluid such that the second fluid is completely surrounded by the first fluid, wherein the second fluid is introduced having a Reynolds number of less than about 3000.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce a substantially round polymer by employing the disclosure as noted in USP 5716558 which specifically addresses the benefits or a circular particle as well as the process as disclosed by the reference to produce a clog free substance since such is specifically stated in the reference as being beneficial for such. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to produce a substantially round polymer by employing the process as disclosed in the USP 5105843 by the reference to produce a clog free apparatus since such is specifically addressed therein.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Terressa Boykin, via the receptionist whose telephone number is (703) 308-2351. The examiner can normally be reached on Monday through Friday from 8:00a.m.-5:30 p.m.

tmb

Examiner Terressa Boykin
Primary Examiner
Art Unit 1711